

Patent Claims:

1. Measuring device (1) for determining the characteristic(s) of a fluid and/or the filling level of this fluid in a reservoir (8) receiving the fluid, which is arranged in particular in the brake fluid reservoir of a motor vehicle brake system that is preferably controlled electronically,  
c h a r a c t e r i z e d    b y
  - a measuring electronic system (2) integrated into the measuring device,
  - a sensor device (4) which is connected to the measuring electronic system in an electrically conductive fashion and used to determine the fluid characteristic(s) and/or to determine the filling level of the fluid in the reservoir receiving the fluid,
  - an electric supply line (18, 26) providing an electric connection between the measuring electronic system and the sensor device, and
  - a detachable or fixed electric connecting line (9) providing a connection between the measuring device and an electronic control unit for the transmission of the sensor signals.
  
2. Measuring device as claimed in claim 1,  
c h a r a c t e r i z e d    i n    t h a t    t h e    m e a s u r i n g    d e v i c e    i n c l u d e s    t w o    o r    m u l t i - p a r t    s e p a r a b l e    h o u s i n g    p a r t s    b e i n g    c o n f i g u r e d    a s    a    c a r t r i d g e    i n    p a r t i c u l a r ,    a n d    a t    l e a s t    o n e    o f    t h e    h o u s i n g    p a r t s    i s    p r o v i d e d    w i t h    a n    a r e a    t h a t    i s    p a r t l y    p e r m e a b l e    f o r    t h e    f l u i d    o r    a t

least with an opening which presets a defined flow resistance.

3. Measuring device as claimed in claim 1 or 2,  
c h a r a c t e r i z e d in that inside the measuring device there is a zone of separation being used to protect the electronics against the brake fluid, with the result that in particular the area of the device is hermetically closed in which the electronics is accommodated.
4. Measuring device as claimed in claim 3,  
c h a r a c t e r i z e d in that the zone of separation is arranged in the area where the housing parts are separated.
5. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that the electric supply line is formed of wires or plane conductors which are led in a seal-tight manner especially through the zone of separation.
6. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that the device is assembled of several parts and can be modified in terms of length in order to adapt to various reservoir shapes, or at least the outside housing is shaped integrally of one material.

7. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that the measuring device is mounted at the top housing part (21) or the cover (7) or into the wall or into the bottom of the reservoir.
8. Measuring device as claimed in claim 7,  
c h a r a c t e r i z e d in that the measuring device (1) is fixed in the area of the reservoir wall or the reservoir cover and is displaced axially in the direction of the longitudinal axis of the measuring device for the adjustment in length, and/or can be turned by a minimum angle about the longitudinal axis in relation to the reservoir or the cover.
9. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that the device comprises a plug cap (24) for connection of a plug (25) for the electric connecting line (9), in which in particular the measuring electronic system is attached, and the said plug cap is displaceable and/or can be turned by a minimum angle about the longitudinal axis in relation to the reservoir or the cover.
10. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that sealing of the electronics and the sensor area is provided by a shaped part which bears from inside against the housing wall of the electronics area in large parts in a form-fit

manner, and the shaped part is an integral elastic seal in particular, or sealing is performed by at least one elastic sealing ring.

11. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that a venting arrangement is provided in the sealing area of the cover.
12. Measuring device as claimed in at least any one of the preceding claims,  
c h a r a c t e r i z e d in that the electronics area is sealed towards the engine compartment by way of a plug extension (27) which additionally comprises a connecting plug (30) for the sensor connecting cable.